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| 10/593,304 | 09/18/2006 | Tetsuro Mizushima | 129489 | 7450 | |
| 25944 | 7590 | 03/10/2010 | | | |
| OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850 | | | | EXAMINER AMARL ALESSANDRO V | |
| ART UNIT 2872 | | PAPER NUMBER | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | |
|------------------------------|--------------------------------------|---|
| Office Action Summary | Application No. 10/593,304 | Applicant(s) MIZUSHIMA ET AL. |
| | Examiner ALESSANDRO AMARI | Art Unit 2872 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

Status

- 1) Responsive to communication(s) filed on 18 September 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-15 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 18 September 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement (PTO/IDS/68)
 Paper No(s)/Mail Date 9/18/06/9/10/09.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 5, 7, 9, 10, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizushima US 2004/0067419.

In regard to claim 1, Mizushima discloses (see for example, Fig. 2) a holographic recording medium having a substrate (12) made of a glass material as described in para. [0047] and a hologram recording layer (20) provided on the substrate, wherein a marker (13) is provided on a surface of the substrate, serving as positional information in the hologram recording layer as described in para. [0037] – [0053].

Regarding claim 3, Mizushima discloses that the marker is provided on the surface opposite to a side upon which a recording beam or reproduction beam is incident as shown in Figure 2.

Regarding claim 5, Mizushima discloses that the hologram recording layer is configured to be sandwiched between two substrates (11, 12) made of a glass material as described in para. [0047] and at least one of the two substrates is provided with the marker as shown in Figure 2.

Regarding claims 7, 9 and 14, Mizushima discloses (see Fig. 2) that an anti-reflection layer (21) for preventing surface reflection of the recording beam or the reproduction beam is formed on at least one of a surface upon which the recording beam or the reproduction beam is incident and an opposite surface.

In regard to claim 10, Mizushima discloses (see Fig. 2) a holographic recording and reproducing method for recording information as a hologram on a holographic recording medium and reproducing the recorded information, the holographic recording medium having a substrate (12) made of a glass material as described in para. [0047] and a hologram recording layer (20) provided on the substrate and a marker (13) provided on a surface of the substrate as positional information, the method comprising detecting the marker by light with a wavelength different from that of a recording beam or a reproduction beam for recording or reproducing the information as described in para. [0037] – [0053].

Regarding claim 12, Mizushima discloses that the recording beam or the reproduction beam is positioned by use of the marker as described in para. [0037] – [0053].

3. Claims 1, 3 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Tachibana et al (hereafter “Tachibana”) US 2008/0002553.

In regard to claim 1, Tachibana discloses (see for example, Fig. 19, 20) a holographic recording medium having a substrate (52) made of a glass material as described in para. [0060] and a hologram recording layer (53) provided on the substrate, wherein a marker (51) is provided on a surface of the substrate, serving as

Art Unit: 2872

positional information in the hologram recording layer as described in para. [0060]-[0062] and [0105].

Regarding claim 3, Tachibana discloses that the marker is provided on the surface opposite to a side upon which a recording beam or reproduction beam is incident as shown in Figures 19 and 20.

In regard to claim 10, Tachibana discloses (see for example, Figs, 19, 20) a holographic recording and reproducing method for recording information as a hologram on a holographic recording medium and reproducing the recorded information, the holographic recording medium having a substrate (52) made of a glass material as described in para. [0060] and a hologram recording layer (53) provided on the substrate and a marker (51) provided on a surface of the substrate as positional information, the method comprising detecting the marker by light with a wavelength different from that of a recording beam or a reproduction beam for recording or reproducing the information as described in para. [0063].

In regard to claim 11, Tachibana discloses (see for example, Figs, 19, 20) a holographic recording and reproducing method for recording information as a hologram on a holographic recording medium and reproducing the recorded information, the holographic recording medium having a substrate (52) made of a glass material as described in para. [0060] and a hologram recording layer (53) provided on the substrate and a marker (51) provided on a surface of the substrate as positional information, the method comprising detecting the marker by light with a recording beam or a

Art Unit: 2872

reproduction beam for recording or reproducing the information as described in para. [0060] – [0062].

Regarding claims 12 and 13, Tachibana discloses that recording beam or the reproduction beam is positioned by use of the marker as described in para. [0060] – [0062].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizushima US 2004/0067419 in view of Isobe et al (hereafter "Isobe") US 5689491.

Regarding claims 2, 4 and 8, Mizushima teaches the invention as set forth above and teaches that the marker is provided on the surface of the substrate opposite to a side on which the hologram recording layer is provided as shown in Figure 2 but does not teach that the marker comprises a print layer. Isobe teaches that a marker can comprise a print layer as described in col. 6, lines 17-24. The known technique of forming positioning marks via a print layer would have predictably resulted in a stable markers and low cost method of providing the markers on a substrate. It would have been obvious to one having ordinary skill in the art at the time the invention was made

to form the markers of Mizushima via a print layer as taught by Isobe in order to provide for a stable markers and low cost method of providing the markers on a substrate.

Regarding claim 4, Mizushima teaches that the marker is provided on the surface opposite to a side upon which a recording beam or reproduction beam is incident as shown in Figure 2.

Regarding claim 8, Mizushima discloses (see Fig. 2) that an anti-reflection layer (21) for preventing surface reflection of the recording beam or the reproduction beam is formed on at least one of a surface upon which the recording beam or the reproduction beam is incident and an opposite surface.

6. Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizushima US 2004/0067419 in view of Hegel US 2002/0145772.

Regarding claims 6 and 15, Mizushima teaches the invention as set forth above but does not teach that the hologram recording layer is sealed by the two substrates and a sealing layer disposed between the two substrates. Hegel teaches (see Figs. 1-5, 7) a hologram recording layer sealed by two substrates (24, 26) and a sealing layer (28, 200) disposed between the two substrates. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the configuration of Hegel for the holographic recording medium of Mizushima in order to protect the holographic recording layer from the environment and thus reduce degradation of the recording layer.

Regarding claim 15, Mizushima discloses (see Fig. 2) that an anti-reflection layer (21) for preventing surface reflection of the recording beam or the reproduction beam is

formed on at least one of a surface upon which the recording beam or the reproduction beam is incident and an opposite surface.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALESSANDRO AMARI whose telephone number is (571)272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ava
03 March 2010

/Alessandro Amari/
Primary Examiner, Art Unit 2872